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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/563,821

01/06/2006

Markku Keskiniva

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EXAMINER

LOPEZ, MICHELLE

ART UNIT

PAPER NUMBER

3721

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/563,821	<b>Applicant(s)</b> KESKINIVA ET AL.	
	<b>Examiner</b> Michelle Lopez	<b>Art Unit</b> 3721	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This action is in response to the amendment filed on 4/28/08.

#### ***Claim Objections***

2. Claims 1-33 are objected to because of the following informalities: in claim 1, line 19, “stress pulse” should be changed to “stress impulse” as set forth back in the claim. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6, 13-14, 16-17, 19-21, 28-29, and 31-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Ludvigson USPN 4,102,408. Ludvigson discloses a pressure fluid operated impact device comprising a frame 10; a tool 11 movably mounted on the frame; control means 23, 24 for controlling pressure fluid feed by the impact device; means for generating a stress impulse in the tool (col. 3, lines 12-50) via the direct contact of a piston with the tool and during the pushing force of the piston against the tool generated by the control and/or adjustment of pressure fluid filled in a working chamber 12, as a function of the resistance encountered by the tool while penetrating the ground; and in the working chamber, the transmission piston 13 is provided with a pressure surface located towards the working chamber, an end of the piston 13 facing the tool coming into contact with the tool either directly or indirectly (col. 3, lines 12-23); and energy charging means 15 for charging energy of the pressure fluid to be fed to the impact

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device necessary for generating the stress impulse. Stop elements for stopping movement of the piston as shown in col. 3, lines 33-61; energy charging space 15 filled with pressurized fluid and whose volume is larger compared with the volume of a pressure fluid amount to be fed in the working chamber 12. The control means 24 allow alternately pressure fluid to flow from the energy charging space 15 to the working chamber via 16 and to close connection between the energy charging space and the working chamber. The energy charging space is a tank 15 separate from the frame 10 and/or a gas accumulator 23. Means for returning the piston after an impact to its pre-impact position (col. 4, lines 27-34).

With respect to claim 1, lines 8-9, it is deemed that the generation of the stress impulse in the tool is created upon either a direct contact of the piston with the tool while impacting the tool with the piston or by indirect contact, i.e. pushing of the piston against the tool via the control and/or adjustment of the pressure fluid within the working chamber (see col. 3, lines 17-50), as broadly claimed. Note that the claim does not disclose either direct or indirect contact of the piston with the tool during the driving operation. Therefore, the impact contact between the piston and the tool is interpreted as the generation of stress impulse of the tool.

With respect to claim 1, lines 17-19, it is deemed that the compression of the pressure fluid within the working chamber 12 and the variation and/or adjustment of its volume within the chamber will be capable of generate a force pushing the piston in the direction of the tool, compressing the tool against the ground and thus generating a stress impulse in the tool, i.e. penetrating force in the tool as shown in col. 3, lines 12-50.

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With respect to claim 1, lines 19-22, the generation of the stress impulse ends substantially at the same time as the influence of the force on the tool ends, i.e. when the variation and/or adjustment of the pressure fluid within the working chamber ends, correspondingly, to discharge pressure fluid from the working chamber in order to enable the piston to return to its original position (col. 3, lines 12-50, and col. 4, lines 27-34).

Ludvigson also discloses a method of generating a stress pulse in a pressure fluid operated impact device as discussed above.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7-11 and 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ludvigson USPN 4,102,408 in view of Muutonen 7032684, for the same reasons as set forth in the previous office action mailed 1/28/08.

5. Claims 12, 18, 27, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ludvigson USPN 4,102,408 for the same reasons as set forth in the previous office action mailed 1/28/08.

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6. Claims 15 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ludvigson USPN 4,102,408 in view of Keskiniva et al. USPN 7,252,154 for the same reasons as set forth in the previous office action mailed 1/28/08.

***Response to Arguments***

7. Applicant's arguments filed 4/28/08 have been fully considered but they are not deemed persuasive. Applicant contends that Ludvigson is silent about that the stress impulse will end simultaneously at the same time as the force acting on the tool. This is not agree with by the examiner for the reasoning set forth above in the rejection.

For the reasons above, the grounds of rejection are deemed proper.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle Lopez whose telephone number is 571-272-4464. The examiner can normally be reached on Monday - Thursday: 8:00 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi Rada can be reached on 571-272-4467. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ML/

Patent Examiner

/Rinaldi I Rada/

Supervisory Patent Examiner, Art Unit 3721